REMARKS

Applicant wishes to thank Examiner Whisenant for the courtesy extended to the inventor, Dr. Merril, and the representative, Nancy Vensko, attorney of record, on October 16, 2003. The Interview Summary Form PTOL-413 summarizes the discussions held at the personal interview. The present response to the outstanding Office Action includes the substance of the Examiner Interview.

A. Disposition of Application

By this amendment, Applicant has canceled Claims 1-9, 13-22, and 25-26 without prejudice and amended Claims 10, 23, and 24. Thus, Claims 10-12, 23, and 24 are pending. This amendment is presented to make explicit that which was implicit in Claim 23. Support is found throughout the specification, for example, at Figure 6, 8:30 - 9:2, 14:30-33, 15:23-24, and original Claim 3. Additionally, per http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/benefitclaims.pdf, the Specification has been amended to include a proper claim to priority. No new matter has been added. Reexamination and reconsideration of the application, as amended, are respectfully requested.

B. Compliance with Requirement to Be Free of the Prior Art

The Patent Office rejected Claims 24-25 under 35 USC 102(b) as being anticipated by Ray et al. (USP 5,650,267 issued July 22, 1997). Ray et al. was said to teach a biomolecular complex and a method of identifying a target biomolecule in an assay comprising the step of forming a biomolecular complex on a support.

The Patent Office rejected Claims 1-2, 4, 6-10, 13-15, 19-20, and 22 under 35 USC 103(a) as being unpatentable over Bayer et al. (WO 97/00329 published January 3, 1997) in view of Ray et al. (USP 5,650,267 issued July 22, 1997). Bayer et al. was said to teach a method of identifying the presence of a biomolecule on a support, and Ray et al. was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule.

The Patent Office rejected Claims 3 and 23 under 35 USC 103(a) as being unpatentable over Bayer et al. (WO 97/00329 published January 3, 1997) in view of Ray et al. (USP 5,650,267 issued July 22, 1997) and further in view of Nissim et al. 1994. As described above, Bayer et al. was said to teach a method of identifying the presence of a biomolecule on a support, and Ray et al.

was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule. Nissim et al. was said to teach Western blotting in which a target molecule is one of a plurality of electrophoretically separated biomolecules wherein the reagent used to detect the separated protein (i.e., the target biomolecule) is a phage displaying a ligand for the separated protein.

The Patent Office rejected Claim 5 under 35 USC 103(a) as being unpatentable over Bayer et al. (WO 97/00329 published January 3, 1997) in view of Ray et al. (USP 5,650,267 issued July 22, 1997) and further in view of Kozulic (USP 5,458,760 issued October 17, 1995). As described above, Bayer et al. was said to teach a method of identifying the presence of a biomolecule on a support, and Ray et al. was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule. Kozulic was said to teach the embodiment wherein the support is a kind of gel.

The Patent Office rejected Claims 11-12 under 35 USC 103(a) as being unpatentable over Bayer et al. (WO 97/00329 published January 3, 1997) in view of Ray et al. (USP 5,650,267 issued July 22, 1997) and further in view of the Stratagene Catalog (1988). As described above, Bayer et al. was said to teach a method of identifying the presence of a biomolecule on a support, and Ray et al. was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule. The Stratagene Catalog was said to teach the embodiment of a pharmaceutical product and a diagnostic kit.

The Patent Office rejected Claims 16-18 under 35 USC 103(a) as being unpatentable over Bayer et al. (WO 97/00329 published January 3, 1997) in view of Ray et al. (USP 5,650,267 issued July 22, 1997) and further in view of Ray et al. (USP 5,679,510 issued October 21, 1997). As described above, Bayer et al. was said to teach a method of identifying the presence of a biomolecule on a support, and Ray et al. in the '267 patent was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule. Ray et al. in the '510 patent was said to teach the correlation of the replication of the phage with the presence of the target biomolecule.

The Patent Office rejected Claim 21 under 35 USC 103(a) as being unpatentable over Bayer et al. (WO 97/00329 published January 3, 1997) in view of Ray et al. (USP 5,650,267 issued July 22, 1997) and further in view of Wagner, Jr. (USP 6,114,081) [sic, USP 6,114,115 issued

September 5, 2000]. As described above, Bayer et al. was said to teach a method of identifying the presence of a biomolecule on a support, and Ray et al. was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule. Wagner, Jr. was said to teach the embodiment wherein the biomolecule present on the solid support is a complex between the first biomolecule and a second biomolecule.

The Patent Office rejected Claim 26 under 35 USC 103(a) as being unpatentable over Ray et al. (USP 5,650,267 issued July 22, 1997) and further in view of Wagner, Jr. (USP 6,114,081) [sic, USP 6,114,115 issued September 5, 2000]. As described above, Ray et al. was said to teach an assay using bacteriophage wherein the replication of the phage is indicative of the presence of a target biomolecule. Wagner, Jr. was said to teach the embodiment wherein the biomolecule present on the solid support is a sample of polynucleotides comprising a polymorphism.

The claims must be free of the prior art. Claim 23, which was amended to make explicit that which was implicit therein, is directed to a method that solves the problem in the prior art of the need for a technique that is even more sensitive than silver staining, discovered by the same Dr. Merril as inventor of the instant application. The step of replicate plating distinguishes over Bayer et al. (WO 97/00329), because replicate plating omits the step in which the bound phage are released subsequent to providing a bound population of phage and a non-bound population of phage and removing the non-bound population of phage as practiced by Bayer et al. (e.g., 12:3-19 "The bound phages are subsequently released ..."). Likewise, the step of replicate plating distinguishes over Ray et al. (USP 5,650,267), because replicate plating omits the step in which the bound phage are released as practiced by Ray et al. (e.g., 8:57 - 9:48 "The method of the invention has been designed such that the inactivated phage is released ..."). Similarly, the step of replicate plating distinguishes over Nissim et al. 1994, because, in Nissim et al., phage were detected after binding to Western blots by antibody staining (e.g., p. 697, col. 2, lst ¶ of "Western blotting") rather than by amplification of phage by phage replication as in the present invention. Wagner, Jr. (USP 6,114,115), Ray et al. (USP 5,679,510), and the Stratagene Catalog are merely secondary references and do not provide the step of replicate plating as defined in the present claims. All dependent claims relate back to Claim 23. As Claim 23 has been amended to make explicit that which was implicit to recite the step of replicate plating, the present set of claims is free of the cited art.

CONCLUSION

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of all outstanding rejections are respectfully requested. Allowance of the claims at an early date is solicited. If any points remain that can be resolved by telephone, the Examiner is invited to contact the undersigned at the below-given telephone number.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 10/27/03

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